

DRAWINGS
FOR
UNITED STATES LETTERS PATENT

TITLE: **EARLY SUPPRESSION FAST RESPONSE FIRE PROTECTION SPRINKLER**

APPLICANT: **MICHAEL A. FISCHER**

FIGURES: **1 - 10**

SHEETS: **1 - 7**

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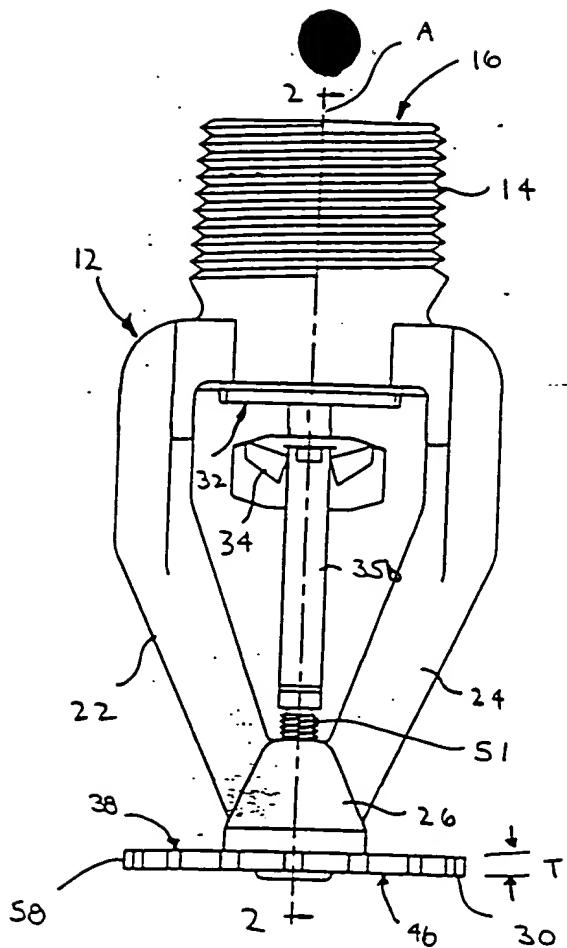


Fig. 1

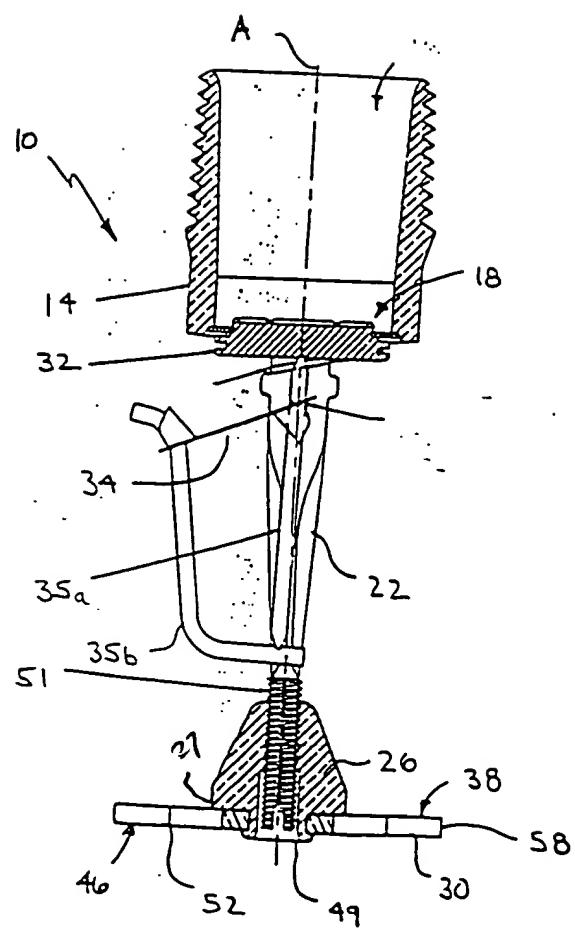


Fig. 2

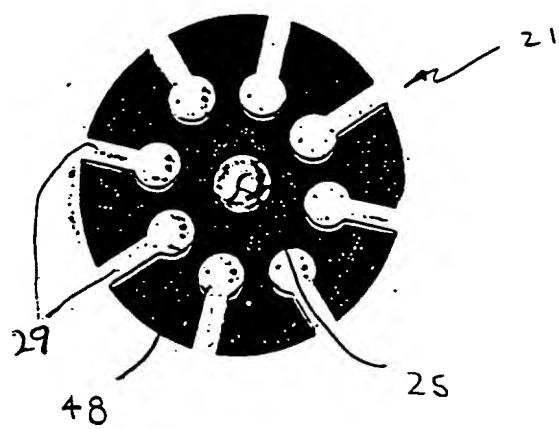


Fig. 3

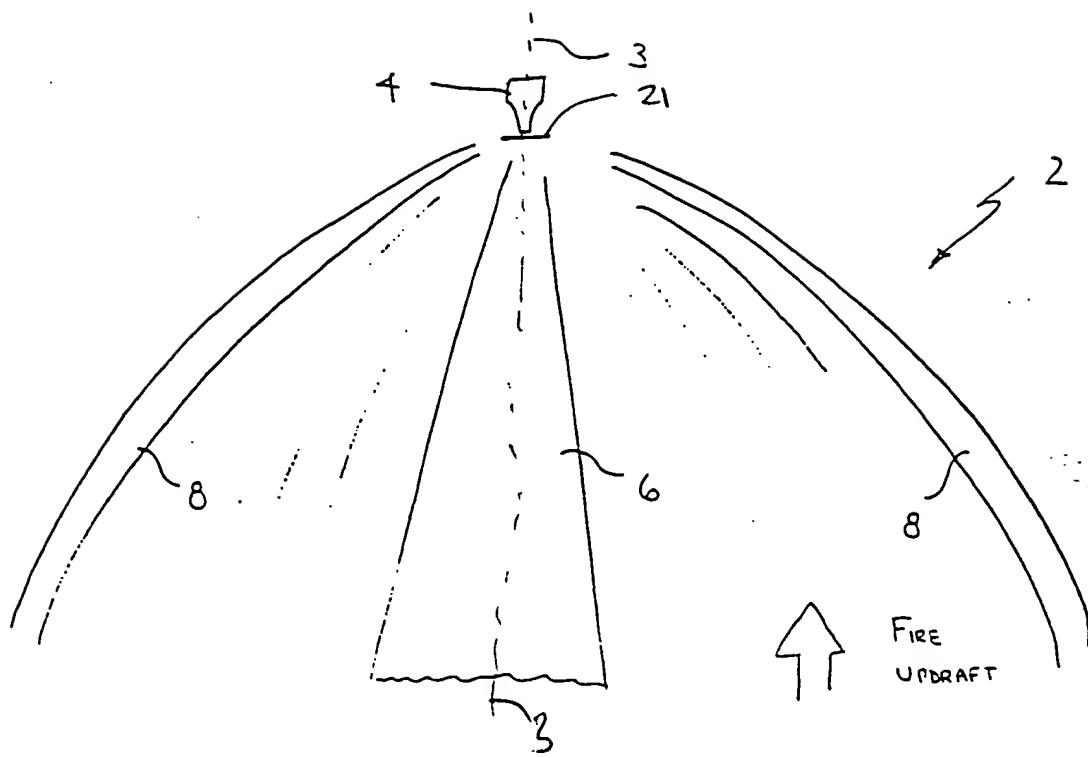
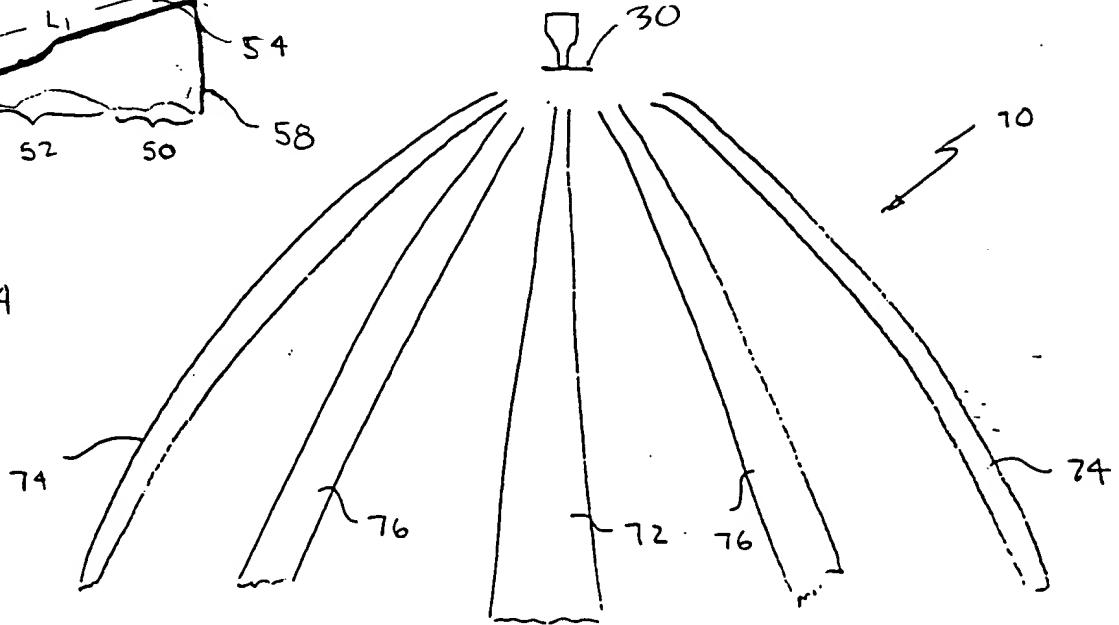
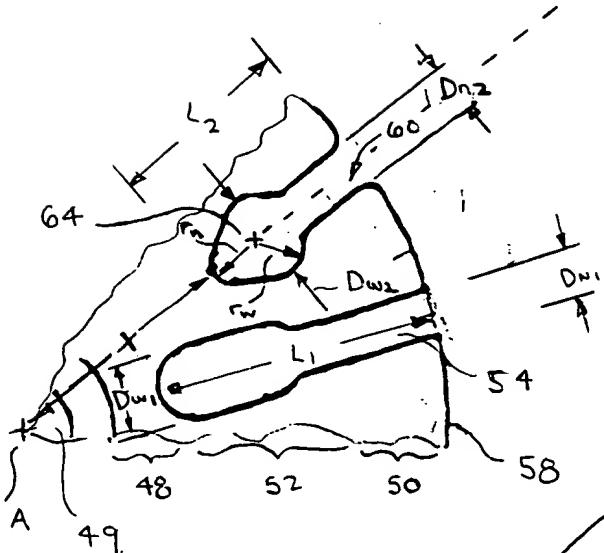
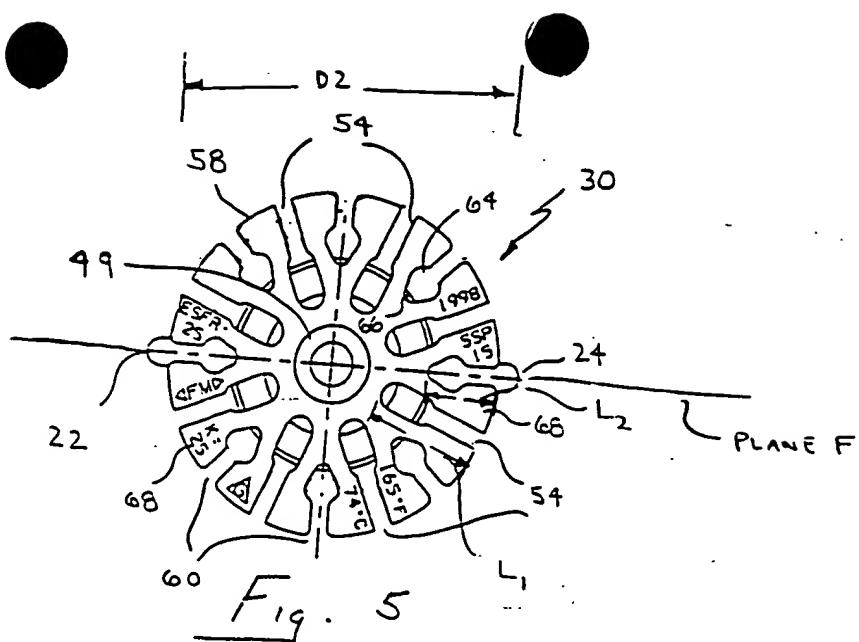


Fig. 4



Grin-K25-1P1s-15ft p-c -(12-2)100gpm-16psi-nf
 9/26/97 07:48 SCANS= 296, J1 No. = 0D0R9.PR

- # 0127
 69 F

Time period of data reduction: Start - 35 sec.; Stop - 270 sec.

0.131	0.165	0.257	0.221	0.247	0.196	0.147	0.099
0.16	0.25	0.337	0.374	0.684	0.316	0.275	0.238
0.149	0.19	0.319	0.414	1.07	0.824	0.359	0.363
0.157	0.249	0.472	0.511	1.45	0.434	0.405	0.283
Center Core ADD = 0.464							
West Flank ADD = 0.217							
East Flank ADD = 0.195							
N-W Qaud. ADD = 0.297							
N-E Qaud. ADD = 0.258							
S-E Qaud. ADD = 0.505							
S-W Qaud. ADD = 0.617							

q₁₀ q₁₂ N

q₁₀ q₁₂

$F_{1,9} = 7 - P_{V, \infty} A_{V,1}$

Grin-K25-1P1s-15ft p-c-(12-2)100gpm-16psi-2000kw
 9/26/97 08:00 SCANS= 268, J1 No. = 0D0R9.PR 69 F
 -- # 0128

Time period of data reduction: Start - 95 sec.; Stop - 202 sec.

0.068	0.104	0.153	0.134	0.177	0.151	0.118	0.107	0.10
0.133	0.15	0.18	0.158	0.351	0.169	0.181	0.156	0.13
0.173	0.221	0.219	0.221	0.172	0.219	0.219	0.168	0.12
0.103	0.189	0.215	0.258	0.524	0.656	0.254	0.167	0.098
0.14	0.265	0.25	0.25	1.16	0.321	0.265	0.272	0.138

Center Core ADD = 0.204
 West Flank ADD = 0.153
 East Flank ADD = 0.158
 N-W Qaud. ADD = 0.156
 N-E Qaud. ADD = 0.169
 S-E Qaud. ADD = 0.373
 S-W Qaud. ADD = 0.320

q0

q2

q2

q2

N

Fig. 8 - Power Art

Grin-K25-1P1s-15ft p-c 100gpm-16psi-X11

9/25/97 12:08 SCANS= 256, J I No. = 0D0R9.PR

- # 0115

69 F

Time period of data reduction: Start - 25 sec.; Stop - 230 sec.

0.093	0.157	0.325	0.502	0.361	0.321	0.13	0.092
0.141	0.266	0.415	0.493	0.483	0.406	0.238	0.128
	0.309		0.655		0.67		0.264
0.206	0.378	0.456	0.681	1.24	0.469	0.235	0.132
0.110	0.259		0.426	1.53		0.37	0.225
				0.547	0.479		0.112
				0.623			

Center Core ADD = 0.592
West Flank ADD = 0.230
East Flank ADD = 0.189
N-W Qaud. ADD = 0.433
N-E Qaud. ADD = 0.392
S-E Qaud. ADD = 0.676
S-W Qaud. ADD = 0.590

N

Fig. 9

Grin-K25-1P1s-15ft p-c -100gpm-16psi-2000kw-X11
9/25/97 13:05 SCANS= 386, J1 No. = 0D0R

-- #0116 F

3/23/97 13:05 SCANS= 386, J1 No. = 0D0R9.PR

Time period of data reduction: Start - 65 sec.; Stop - 350 sec.

Center	Core	ADD	=	0.338
West	Flank	ADD	=	0.158
East	Flank	ADD	=	0.150
N-W	Qaud.	ADD	=	0.190
N-E	Qaud.	ADD	=	0.214
S-E	Qaud.	ADD	=	0.503
S-W	Qaud.	ADD	=	0.327

Fig. 10